

13.—*Iassus* (*D.*) *pulicaris*, Fall.

Deltocephalorum minimus. Cæruleo-niger, nitidus, supra brunneus, obsolete fusco varius. Vertex triente brevior quam sua inter oculos latitudo, pronoto æqualis longitudine; quam apud cæteras species obtusior. Hemelytra vel abdomine longiora, vel abbreviata, membrana contracta. Pedes nigri; genua, tibiæ late, tarsorum articuli anguste, basi nigri:—sed pedes interdum plus minus testacei. Segmenta abdominalia (♀) nonnunquam albido-marginata. ♂ ♀.

Long. 1; alar. exp. 2 lin.

Cicada pulicaris, Fall., Hem. 2 p. 34.

I. pulicaris, Flor, R. L., 2. p. 266.

Deltocephalus melanopsis, Hardy, Tynes. Trans. 1. p. 247.

Phrynomorphus nitidus (partim), Brit. Mus. Coll.

Common on dry grassy banks from June to September.

(To be continued.)

NOTES ON THREE LITTLE-KNOWN SPECIES OF BRITISH *HEMEROBIDÆ*.

BY R. M'LACHLAN, F.L.S.

Having been engaged in an examination of the British species of *Hemerobidæ* and allied families, preparatory to a Monograph of the species which I intend to work out in the same manner as that followed in the *Trichoptera*, I have been for some time aware of the existence in this country of three species omitted in Dr. Hagen's synopsis of the British species, published in the Entomologist's Annual for 1858; and I have thought it advisable to lay before those readers of this Magazine who attend to this subject, a short account of these three species, all of which we owe to the indefatigable researches of Mr. J. C. Dale.

1.—*Sisyra Dalii*, McLachlan.

Hemerobius nitidulus, (Dale) Walker, Brit. Mus. Cat. Neurop., pt. 2, p. 296, 61; nec. Fab.; nec. Stephens.

Castanea: antennis rufo-fuscis; oculis nigris; abdomine nigro-fusco; pedibus pallidis; alis anticis testaceo-hyalinis, venulis nonnullis transversalibus medium versus furcisque marginalibus fuscis aut fusco-nebulosis; posticis pallidioribus. Exp. alar. 6 lin.

In size rather larger than *S. fuscata*, F., and *S. terminalis*, Dale; can be distinguished from both by its castaneous head and thorax, by the testaceous tint of the anterior wings, and by the presence in these

of several (3 to 5) transverse veins placed irregularly rather before the middle, which transverse veins, with others placed nearer the base, are distinctly darker; a peculiarity shared also by the small marginal and other furcations, especially at the points where the veins divide, hence the wings appear slightly spotted. In *fuscata* there is very rarely more than one transverse vein in the middle of the wing, and in *terminalis* these veins are almost entirely absent; the former is also at once separable by its universally darker colour, and the latter by its great pallidity, and by the pale tips of the antennæ.

This species has been found by Mr. Dale at Glanville's Wootton, and also at Ambleside. It appears to be unknown on the Continent.

2.—*Hemerobius pellucidus*, (Dale) Walker, Brit. Mus. Cat. Neurop., pt. 2, p. 284, 19 (1853).

Hemerobius fuscescens, Wallengren. Öfversigt af Kongl. Vetenskaps-Akademiens Förhandlingar, 1863 (published in 1864), p. 22, 10.

This little species is of the same size as *H. elegans*, Steph. (= *H. Marshami*, Steph., = *Mucropalpus pygmæus*, Rambur), which at first sight it greatly resembles. A closer examination will show, however, that in *H. elegans* the longitudinal veins in the anterior wings are delicately spotted with white, of which there is no trace in *pellucidus*; but there is a more important structural difference in the neururation, for *H. elegans* possesses only two *sectores radii*, whereas in *pellucidus* there are three. The transverse veins are somewhat clouded, but otherwise the wings are remarkably pellucid; in *elegans* the anterior wings are more or less clouded and spotted with grey.

According to Wallengren's description I have no doubt whatever that his *fuscescens* is identical with *pellucidus*; for the comparison he draws between *pygmæus* (*elegans*) and *fuscescens* answers precisely to our insect. He says that it is found here and there on pine trees.

Mr. Dale tells me that *pellucidus* is found at Glanville's Wootton, Dorsetshire, but was more common formerly than at present.

3.—*Hemerobius dipterus*, Burmeister, Handb. Ent. 2, p. 973, 1; Curtis Trans. Ent. Soc. London, new series, vol. 3, p. 56.

This most singular insect may at once be known by the almost entire absence of posterior wings, these organs being reduced to two minute lobes. As I have not the specimen before me at the present moment, I cannot give a detailed description here. One singular character may be worthy of notice, viz., that the anterior wings are so formed, that above they present a very convex surface, and correspondingly concave beneath.

It is an exceedingly rare species on the Continent. The only known British example was taken by Mr. Dale near Langport, Somerset, at the end of June, 1843.

H. ochraceus, Wesmael, is a discovery made since the publication of the "Synopsis:" *vide* Ent. Ann. 1863, p. 137.

It may be worthy of remark, that according to the types, *H. humuli* of Stephens (Ill. p. 108, 7) is not the Linnæan species of that name, but a small pale form of *H. nervosus*, Fab.; whereas *H. lutescens*, *affinis*, *paganus*, *apicalis*, *subfasciatus*, *irroratus*, and *marginatus*, of Stephens, are all forms of the true *humuli*.

Through the kindness of Mr. Piffard, I have just added to my collection a British example of *Drepanopteryx phalænoides*, taken at Windermere, by Mr. Strouvelle, of Windermere College. This insect, though common on the Continent, is very rare here; I believe that all the native specimens have occurred either in the north of England or south of Scotland.

ON SOME PECULIARITIES IN THE DEVELOPMENT OF HEMIPTERA— HETEROPTERA.

BY J. W. DOUGLAS.

During the critical examination of the *Heteroptera*, two kinds of variation from typical structure came under my notice.

1st. *Abnormal structure of antennæ*.—In the section *Lygæina* examples frequently occur having one of the antennæ shorter than the other, and in every such case the shorter one has 3 instead of 4 joints. The first and terminal joints are of the usual form, the last generally slightly shorter than usual in the respective species, but sometimes longer, the second joint about half as long again as in the other antenna, and the joint corresponding to the 3rd in the ordinary form wholly wanting. The result is that the antenna, although it has but three joints, is longer than if the joints were of the normal length, yet is perceptibly shorter than the other antenna; it is dwarfed but not deformed. This peculiarity never extends to both of the antennæ; it occurs as often on the left side as on the right, and is not confined to either sex, and the insects so affected are in other respects perfectly developed. The most remarkable thing is, that it is always the 3rd joint that is wanting; the impression produced on the observer is that Nature, having been short of material, had yet determined to produce the terminal joint as essential to the functions of the antenna, and had endeavoured to do the best she could under the circumstances by